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Committee on Natural Resources
Sub Committee on Water and Power

Field Hearing: "Managing Water for the Future: How Federal, State, and Local Entities are Supporting Agriculture."

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Testimony of

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Madame Chair, Sub Committee members, I would first like to introduce myself, I am the manager of two irrigation reservoirs on the eastern plains of Colorado. The North Sterling and Prewitt reservoirs, these reservoirs were but 100 years ago and provide water to over 70,000 acres of farm ground in the South Platte Valley in Morgan and Logan Counties. I am a native of Colorado growing up and using North Sterling water on my family's ranch. I moved away from the area for a short time to attend Colorado State University, where I received my degree in engineering, and lived and worked in Fort Collins, Colorado for 5 years as a consulting engineer. I moved back to the Sterling area and have been managing the reservoirs for 18 years. When I took over as manager I was blessed to have the past manager in the office for 6 years. He had been with the reservoirs for over 50 years. I learned a lot from him, not only about the operations of the reservoirs but also the South Platte River and Colorado water rights.

I tell you this because in order to understand how best to assist agriculture along the South Platte Basin you must understand the river that we use, therefore I thought I might give you both a quick history lesson and a basic Colorado water rights lesson.

The South Platte River is very different than what early explorers and settlers found when they first arrived here. Today the river is tree lined and flows water year round. That didn't happen prior developing the river for irrigated agriculture. The are many sources the can prove the treeless valley but one I like to use is that there is a ditch system in my area called the Lone Tree ditch and was named the Lone Tree because it diverted water from the river at the only tree for miles around. Not only were there no trees but there was only water in the river during snowmelt and large rainfall events. At other times the river disappeared into the underlying aquifer, and no water was seen for months. However to meet the food needs of the growing mining industry people began to irrigate land where there was water present in the hot summer months. This occured

close to the mountains before the water had a chance to disappear. By developing irrigated land along the front range the farmers put water into ditches, these ditches were earthen and leaked water into the underground, these ditches delivered water to farms and the water was used by the crops. But not all the water, because of the early inefficient irrigation, some of the water ran across and out the end of the field. This method of irrigation also resulted in water moving deep into the ground out of reach of the crop's roots. Because the South Platte River is located at the bottom of a valley all this water - leaky ditches, runoff from fields, deep percolation from irrigation - eventually made its way back to the river. This development of water upstream delayed some of the snowmelt and rainfall water that used run out of the State in a month or two. So now people downstream of this irrigation development began to see water later in the summer and began to develop irrigation systems in their area and this development slowly moved down river and eventually irrigated agriculture was found from Denver to Julesburg at the Stateline with Nebraska. This development can be seen in the water rights decrees along the river. In general, water rights were developed along the front range in the 1860s, further east in Weld and Morgan counties in the late 1860s and 1870s, in my area of Logan County in the 1870s and 1880s, and further toward the state line in the 1890s. Why is this important - let me tell you.

I go conferences and meetings and just meet people and often I am given the opportunity to discuss water with many people. And many times I hear agriculture uses so much water - if the farmers were just more efficient - if they would just conserve water we would have enough water to meet our future needs. It is true agriculture along the South Platte uses a lot of water and then we use it again and again and again. From Denver to the Stateline the water in the South Platte is used 7 times. The leaky ditches, the runoff from fields, the deep percolation into the underground from irrigation - some call it waste - I call it my water right. These are what we call return flows, which we further down stream heavily depend upon. Come out in the heat of the summer when the river near Greeley is a trickle of 2 or 300 cubic feet per second and watch as we deliver 2 2 or 3,000 acre feet downstream. Return flows - my water right.

When you implement conservation ideas or more efficient irrigation practices the return flows decrease, affecting downstream users and with Colorado water law - sometimes affecting upstream users. I might become more efficient in my system - on my farm, but the system isn't any more efficient as a whole. That is my first point - we agriculture producers along the South Platte are efficient and have been for well over 100 years.

Conserving water within cities can have similar affects. The waste and runoff from cities has also historically been used by those of us downstream. When this water is conserved or reused by municipalities it means less water downstream. However, this doesn't necessarily mean reduced water for irrigation - let me explain. Colorado water law is based on the doctrine of prior appropriation - also known as first in time, first in right. This means that if I developed my water right before you, I get my entire water right before you get any of yours - provided I use it for the beneficial use for which it was intended. It's a good, equitable system and has worked for 100's of years. When a

municipality begins to conserve water or reuse water - as I said, flows downstream decrease - this can diminish water for irrigated agriculture, but it can also affect upstream users as well by inducing a call for water from a downstream user who has an older more senior water right than an upstream municipality. So this conservation or reuse can result in less water for a municipality on some of the water rights it historically has depended upon. So my second point is - when there are changes made to a tight water system such as the South Platte there are many times unintended effects and conservation and reuse does not always yield water on a 1 for 1 basis.

Currently agriculture is facing many challenges. In the arid west one of the challenges is competition for water. Colorado is expected to continue to grow. By 2050 the population is predicted to double from 5 million people to 10 million. Most of this growth is expected in the Denver/Front Range area. This means that the South Platte Basin will bear the lion's share of this population growth. There are only a few ways this water need can be met:

1. Conservation - Reuse: This will help but as I explained above the amount of water from this source is very limited.
2. New Project Development within the South Platte Basin: This would allow us to capture more of the water to which we are entitled.
3. New Project Development in other Basins: This has been done in the past and water to which Colorado is entitled is still available.
4. Dry up of Agriculture: This seems to be the way with the fewest roadblocks and something that has been done in the past sometimes with very detrimental effects.

It is predicted that if agriculture is the only method used to meet these future needs, 44% of the South Platte's irrigated agriculture will be dried up. Over 375,000 food producing acres will be idled. As we grow, we also need to feed the population. In the United States we enjoy an inexpensive, abundant, safe food supply - thanks to our farmers. I believe it is imperative that we continue to allow and encourage ag producers to continue their production.

In the water world of Colorado the way you allow and encourage ag producers to continue is to help relieve pressure from the front range municipalities and this is done by assisting and encouraging water storage projects both in the South Platte Basin and in other basins. There are projects on the drawing board, with people willing to pay for them, but due to burdensome regulations and little or no support from elected officials these projects are drug on and on for years all the while the agriculture water of the eastern plains is the target of developers, speculators, and municipalities.

Long ago agriculture realized the best way to conserve or be efficient with water is to store water in times of plenty and use this water in times of need. That is why we have reservoir systems like the two I manage. Forward thinking water pioneers stepped up and developed storage for the future. The ideas and projects of these pioneers have carried us this far and it's time to continue on what they built. My third and final point:

“The South Platte River has changed over the past 100 years but the fact that storage is the answer to water shortage has not”.

Thank you for allowing me the opportunity to speak to you today.

Submitted by Jim Yahn
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